# Fact Sheet

## JANUS COMBAT SIMULATIONS WITH COLD ENVIRONMENT EFFECTS

### PURPOSE

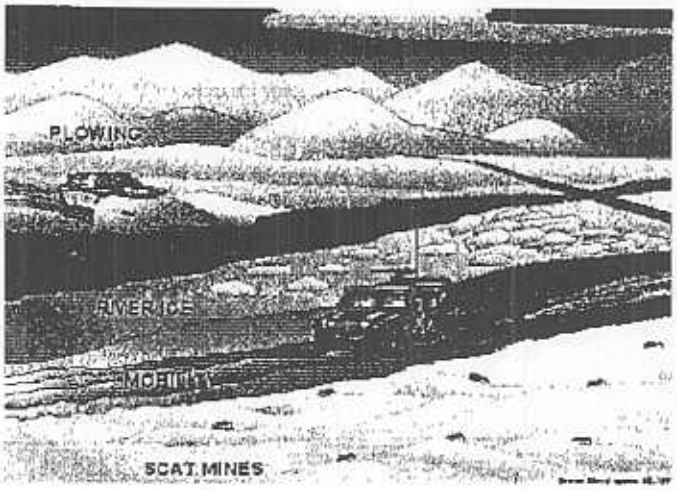
To provide the Army a combat simulation environment to measure the effects of cold environments on the outcome of combat activities.

### BACKGROUND

The Army has had no capability to conduct a simulation of combat in an environment that treats cold weather effects. To address that deficiency, the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) formed a partnership with the Simulation Lab of the Systems Engineering Department at the United States Military Academy at West Point, New York. In a cooperative effort, Janus software is being modified to handle selected winter environment effects. In the first phase, mobility data were modified to reflect the effects of snow cover and frozen ground on the movement of vehicles. A TRADOC-approved scenario was modified and simulations were conducted to assess only the mobility impacts of the snow and frozen ground on the outcome of the simulation. The results from this simulation showed a 70% increase in blue casualties from these mobility impacts as a result of seven inches of low-density snow.

### CURRENT EFFORTS

- Including the effects of snow cover on target/background signatures and the resulting effects on performance of sensor systems.
- Including the effects of cold environment atmospheres, including airborne snow, on the performance of sensor systems.
- Conducting simulations with these modifications to both mobility and sensor performance.
- Developing a sophisticated Java-based client to interface with the Janus host that will for the first time allow the general user to set up and conduct cold environment simulations using Janus.

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